

THE EFFECTS OF USING GRAPE SEEDS IN FOODS ON OXIDATIVE DETERIORATIONS

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The main cause of deterioration in food is the proceeding oxidative reactions which are responsible for the nutritional value losses, as well as aroma, taste and texture degradation. Antioxidants are the component able to prevent or inhibit oxidation processes in human body and food products. Polyphenols that are presented in especially fruit and vegetables are the most numerous group of antioxidant components. The significance and usage of substances that protect them against oxidation increase in the result of consumption of food containing lots of polyunsaturated fatty acids. The antioxidant supplementation is an accepted method for the prolonging stability and storage life of food products, especially fatty foods. The artificial antioxidants like butylated hydroxyanisol (BHA) and butylated hydroxytoluene (BHT), have a limited allowance for food because of their potential cancerogenicity. Due to that, the importance of natural antioxidants increases. Grape (*Vitis vinifera*) seeds which are the by-products of wine and juice industry, are rich sources of monomeric phenolic compounds, such as (+)-catechins, (-)-epicatechin and (-)-epicatechin-3-O-gallate and dimeric, trimeric and tetrameric procyanidins and these compounds act as antioxidant agents via free radical. The inhibitory potential of grape seed proanthocyanidin related to lipid peroxidation seems to increase with the degree of polymerization of the molecules. Grape seed proanthocyanidins with a greater number of catechin and epicatechin units appear to have more potent inhibitory activity. The proanthocyanidins of grape seed has high antioxidant activity. Its using as a natural antioxidant supplementation in food can help to prevent oxidation reaction, increase shelf life of food. It is named as natural preservative due to these attributes.

Keywords: Grape seeds, lipid peroxidation, natural antioxidant, oxidative deterioration.

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